

REMARKS

The final Office Action dated October 21, 2003 has been received and carefully considered. The above amendments and the following remarks are being submitted as a full and complete response to the Office Action.

The finality of the Office Action is premature. No claim amendments whatsoever were submitted in response to the previous Office Action. Therefore, the assertion on page 8 of the Office Action, alleging that the new grounds of rejection were necessitated by the applicant's amendments, is false. The relevant amendment (i.e., concerning "remapping") was not made in the response under consideration of September 15, 2003, but rather was made in the response to the first Office Action submitted on March 20, 2003.

An Office Action containing a new rejection can be made final only if claim amendments necessitating the new rejection are made in the response currently under consideration. Finality cannot properly be predicated on amendments introduced in a prior response to an earlier office action, which has already be considered and acted on by the Examiner.

Accordingly, the applicant respectfully requests that the finality of the Office Action be withdrawn, and that the above amendments be entered and considered.

The independent claims have been amended to recite, with better clarity, the moving and remapping features of the invention. In particular, in the present invention, after initially mapping the texture images onto respective polygons

making up an object, the same texture images are then moved within the texture rendering area, so that the textures become associated respectively with different polygons from among the plurality of polygons making up the same object. Accordingly, when remapped, the moved texture images are remapped respectively onto such different polygons.

The amendments are fully supported by the present specification. For example, as shown and discussed in the present specification in relation to FIG. 3, an object 204 is made up of a plurality of respective semitransparent or transparent polygons 206, with respective texture images 208 (e.g., see FIGS. 4A and 4B) being initially mapped onto each of the polygons. Then, the texture images are moved, as shown in FIG. 3, to become associated with different adjacent polygons. For example, the texture images in group ① are moved, as shown by the left-pointing arrows, so that the texture image (5) is shifted to occupy the polygon formerly occupied by texture image (4), the texture image (4) is shifted to occupy the polygon formerly occupied by texture image (3), and the texture image (1) is shifted to occupy the polygon formerly occupied by texture image (5), and so forth, in a circulating manner. Thus, when the textures are moved, each respective texture ends up being associated with a different adjacent polygon from where it had been previously mapped, and the moved texture is then remapped onto the different polygon.

This important characterizing feature of the invention is not shown or suggested in the cited prior art. None of the

applied references suggests initially mapping a plurality of respective textures onto associated polygons making up an object, and then moving the textures, each respectively, to become associated with a different polygon, while remapping the textures respectively onto the different polygons.

Claims 1, 5-7, 11-13 and 17-47 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Montag et al. (U.S. Patent No. 5,920,492) in view of Brett et al. (U.S. Patent No. 6,525,765).

Montag et al. discloses a computer display method for simulating a fire, based on a particle system object model, defined by flame particle and smoke particle parameters. As discussed in the reference, the flame and smoke particles are defined to have various parameters, including a texture value. However, there is no indication in the reference that the texture values are "moved" in a texture rendering area, so as to become associated with different adjacent polygons, and then remapped onto the different polygons.

As the Examiner already acknowledges, Montag et al. does not disclose or suggest any features of the claimed remapping process. (Page 3 of the Office Action, first full paragraph.) Further, the cited reference does not disclose a texture mapping method, like that of the claimed invention, in which textures associated with respective polygons making up an object are moved, so as to become associated with different textures in the object, and then remapped onto the different textures. Thus, the cited reference also lacks any suggestion for the claimed "moving" steps and means, as now defined in the amended claims. On the

contrary, according to the reference, each graphics primitive or "billboard" associated with a fire or smoke particle is assigned a specific (i.e., unchanging) color and texture, as determined by a look up table. (Col. 4, lines 61-63.) There is no suggestion that the textures associated with the graphics primitives are "moved" as in the claimed invention, so as to become associated with different graphics primitives.

The secondary reference, Brett et al., also lacks any suggestion for the claimed "moving" steps and means, since there is likewise no suggestion in this reference for moving a plurality of texture images, initially associated with certain polygons, so as to become associated with other different polygons, and then remapping the textures onto the different polygons, as currently claimed.

On the contrary, Brett et al. is directed to an image processing technique for use with scanned digital image data from a cinematographic film. Certain texture mapping processes used with this system are discussed in connection with FIGS. 1 through 3. However, none of these processes involves "moving" a texture image to become associated with a different polygon, as in the claimed invention.

More specifically, FIGS. 1a, 1b and 1c, which represent a problematic prior art technique according to Brett et al., show a single large texture having a fixed size and position relative to a screen frame. When the object, in this case a rectangular box 1, is moved relative to the fixed texture image, different parts of the texture appear on the box. Since only a single texture

image is shown, which maintains a constant position relative to the frame, clearly there is no suggestion of moving a plurality of textures, so as to become associated respectively with different polygons making up an object, as in the claimed invention.

FIGS. 2a, 2b and 2c represent a proposed solution to the problem illustrated in FIGS. 1a, 1b and 1c. In this case, a fixed texture is associated with a given object, again a box 1, so that the texture maintains a fixed position relative to the box as the box moves within the frame. However, in this embodiment, a fixed texture image is associated with each object, which in this case consists of a single rectangular-shaped polygon. There is also no suggestion of moving a plurality of textures, so as to become associated respectively with different polygons making up an object, as in the claimed invention.

FIGS. 3a and 3b again show a single texture image associated with a single object, which consists of a polygon viewed from different orientations. In this case, as the orientation of the box 1 in the frame is changed, as illustrated by a square changing into a trapezium shape, the texture image is warped to correspond to the displayed motion of the box. Such resizing of a texture image to fit the displayed orientation of the box, however, does not involve "moving" a plurality of textures, as in the claimed invention, so as to become associated respectively with different polygons making up an object.

Accordingly, it is respectfully submitted that neither of the cited references, Montag et al. or Brett et al., discloses or suggests the features recited in the amended claims.

Claims 1, 5-7, 11-13 and 17-47 were also rejected under 35 U.S.C. § 103(a) as being unpatentable over Ebersole et al. (U.S. Patent No. 6,500,008) in view of Brett et al. (U.S. Patent No. 6,525,765).

The statement of rejection, on page 5 of the Office Action, indicates an incorrect patent number for the Brett et al. reference. The correct patent number for Brett et al. is 6,525,765 (not 6,448,971). U.S. Patent No. 6,448,971 refers to the earlier cited, and now withdrawn, Seefeldt et al. reference.

Turning more specifically to the content of the rejection, Ebersole et al. discusses creating a texture map for simulating water flow (col. 9, lines 16-23). However, there is no suggestion in the reference for the technique of the claimed invention, wherein textures associated with respective polygons making up an object are moved, so as to become associated with different adjacent textures in the object, and then remapped onto the different textures.

As already discussed above, Brett et al. also lacks any suggestion for the claimed features. Therefore, Brett et al. cannot make up for the deficiency of Ebersole et al.

For the foregoing reasons, it is respectfully submitted that the claimed invention is not anticipated and would not have been obvious to a person skilled in the art at the time the present invention was made, from either of the cited references.

This paper is accompanied by a petition for an extension of time, extending the due date for responding to the Office Action one month, until February 21, 2004. No other fees are due. Notwithstanding, should it be deemed that fees, or deficiencies in fees, are required in connection with this or any accompanying communication, such amounts may be charged to the Attorney's Deposit Account No. 07-2519.

Respectfully submitted,



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